

Amendments to the Claims

This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

20 (Withdrawn). A vector comprising the nucleotide sequence according to claim 42.

21 (Withdrawn). Transformed cells having the nucleotide sequence according to claim 42 in an expressible state.

22 (Withdrawn). A process for producing a protein which comprises culturing cells transformed with the nucleotide sequence (aa) to (ll), (vv) to (zz), (aaa), (bbb) or (ccc) of claim 42, and collecting mBSSP2 produced.

23 (Withdrawn). A process for producing a protein which comprises culturing cells transformed with the nucleotide sequence (mm) to (uu), (ddd) or (eee) of claim 42, and collecting hBSSP2 produced.

24 (Withdrawn). The process according to claim 22, wherein the cells are *E. coli* cells, animal cells or insect cells.

29 (Withdrawn). An antibody against the protein according to claim 41 or a fragment thereof.

31 (Withdrawn). A process for producing a monoclonal antibody against the protein according to claim 41 or a fragment thereof which comprises administering the protein according to claim 41 or a fragment thereof to a warm-blooded animal other than a human being, selecting the animal whose antibody titer is recognized, collecting its spleen or lymph node, fusing the antibody producing cells contained therein with myeloma cells to prepare a monoclonal antibody producing hybridoma.

32 (Withdrawn). A method for determining the protein according to claim 41 or a fragment thereof in a specimen which is based on immunological binding of an antigen against the protein or a fragment thereof to the protein or a fragment thereof in the specimen.

33 (Withdrawn). A method for determining hBSSP2 or a fragment thereof in a specimen which comprises reacting a monoclonal antibody or a polyclonal antibody against the protein (i), (j), (k), (l), (m) or (n) of claim 41 or a modified derivative or fragment thereof and a labeled antibody with hBSSP2

Appln. No. 09/856,371  
Amd. dated June 30, 2004  
Reply to Office Action of June 16, 2004

or a fragment thereof in the specimen to detect a sandwich complex produced.

34 (Withdrawn). A method for determining hBSSP2 or a fragment thereof in a specimen which comprises reacting a monoclonal antibody or a polyclonal antibody against the protein (i), (j), (k), (l), (m) or (n) of claim 41 or a modified derivative thereof or a fragment thereof with labeled hBBSP2 and hBSSP2 or a fragment thereof in the specimen competitively to detect an amount of hBSSP2 or a fragment thereof in the specimen based on an amount of the labeled hBBSP2 reacted with the antibody.

35 (Withdrawn). The method according to claim 32, wherein the specimen is a body fluid.

36 (Withdrawn). A diagnostic marker for diseases in tissues comprising the protein according to claim 41.

41 (Currently amended). A protein selected from the group consisting of:

(a) ~~a protein having the amino acid sequence of 238 amino acids represented by SEQ ID NO: 2,~~

(b) a protein having an amino acid sequence derived from the amino acid sequence represented by SEQ ID NO: 2 by deletion, substitution or addition of one to several amino acids and having the same property as that of the protein having the amino acid sequence represented by SEQ ID NO: 2;

(c) a protein having the amino acid sequence of 273 amino acids represented by SEQ ID NO: 4;

(d) a protein having an amino acid sequence derived from the amino acid sequence represented by SEQ ID NO: 4 by deletion, substitution or addition of one to several amino acids and having the same property as that of the protein having the amino acid sequence represented by SEQ ID NO: 4;

(e) a protein having the amino acid sequence of 311 amino acids represented by SEQ ID NO: 6;

(f) a protein having an amino acid sequence derived from the amino acid sequence represented by SEQ ID NO: 6 by deletion, substitution or addition of one to several amino acids and having the same property as that of the protein having the amino acid sequence represented by SEQ ID NO: 6;

(g) a protein having the amino acid sequence of 455 amino acids represented by SEQ ID NO: 8;

(h) a protein having an amino acid sequence derived from the amino acid sequence represented by SEQ ID NO: 8 by deletion, substitution or addition of one to several amino acids

~~and having the same property as that of the protein having the amino acid sequence represented by SEQ ID NO: 8;~~

(i) (a) a protein having the amino acid sequence of 240 amino acids represented by the 1st to 240th amino acids of SEQ ID NO: 10;

[(j)] (b) a protein having an amino acid sequence derived from the amino acid sequence represented by the 1st to 240th amino acids of SEQ ID NO: 10 by deletion, substitution or addition of one to several amino acids and having the same property as that of the protein having the amino acid sequence represented by the 1st to 240th amino acids of SEQ ID NO: 10;

[(k)] (c) a protein having the amino acid sequence of 457 amino acids represented by the -217th to 240th amino acids of SEQ ID NO: 10;

[(l)] (d) a protein having an amino acid sequence derived from the amino acid sequence represented by the -217th to 240th amino acids of SEQ ID NO: 10 by deletion, substitution or addition of one to several amino acids and having the same property as that of the protein having the amino acid sequence represented by the -217th to 240th amino acids of SEQ ID NO: 10;

[(m)] (e) a protein having the amino acid sequence of 217 amino acids represented by the -217th to -1st amino acids of SEQ ID NO: 10;

[(n)] (f) a protein having an amino acid sequence derived from the amino acid sequence represented by the -217th to -1st amino acids of SEQ ID NO: 10 by deletion, substitution or addition of one to several amino acids and having the same property as that of the protein having the amino acid sequence represented by the -217th to -1st amino acids of SEQ ID NO: 10; and

[(o)] (g) a modified derivative or fragment of these proteins (a) to [(n)] (f).

42 (Withdrawn). A nucleotide sequence selected from the group consisting of:

(aa) a nucleotide sequence represented by the 1st to 714th bases of SEQ ID NO: 1;

(bb) a nucleotide sequence encoding the amino acid sequence represented by SEQ ID NO: 2;

(cc) a nucleotide sequence hybridizable with a nucleotide sequence which is complementary to the above nucleotide sequence (aa) or (bb) under stringent conditions and encoding a protein having the same property as that of the protein having the amino acid sequence represented by SEQ ID NO: 2;

(dd) a nucleotide sequence represented by the 247th to 1065th bases of SEQ ID NO: 3;

(ee) a nucleotide sequence encoding the amino acid sequence represented by SEQ ID NO: 4;

(ff) a nucleotide sequence hybridizable with a nucleotide sequence which is complementary to the above nucleotide sequence (dd) or (ee) under stringent conditions and encoding a protein having the same property as that of the protein having the amino acid sequence represented by SEQ ID NO: 4;

(gg) a nucleotide sequence represented by the 516th to 1448th bases of SEQ ID NO: 5;

(hh) a nucleotide sequence encoding the amino acid sequence represented by SEQ ID NO: 6;

(ii) a nucleotide sequence hybridizable with a nucleotide sequence which is complementary to the above nucleotide sequence (gg) or (hh) under stringent conditions and encoding a protein having the same property as that of the protein having the amino acid sequence represented by SEQ ID NO: 6;

(jj) a nucleotide sequence represented by the 116th to 1450th bases of SEQ ID NO: 7;

(kk) a nucleotide sequence encoding the amino acid sequence represented by SEQ ID NO: 8;

(ll) a nucleotide sequence hybridizable with a nucleotide sequence which is complementary to the above

nucleotide sequence (jj) or (kk) under stringent conditions and encoding a protein having the same property as that of the protein having the amino acid sequence represented by SEQ ID NO: 8;

(mm) a nucleotide sequence represented by the 807th to 1526th bases of SEQ ID NO: 9;

(nn) a nucleotide sequence encoding the amino acid sequence represented by the 1st to 240th amino acids of SEQ ID NO: 10;

(oo) a nucleotide sequence hybridizable with a nucleotide sequence which is complementary to the above nucleotide sequence (mm) or (nn) under stringent conditions and encoding a protein having the same property as that of the protein having the amino acid sequence represented by the 1st to 240th amino acids of SEQ ID NO: 10;

(pp) a nucleotide sequence represented by the 156th to 1526th bases of SEQ ID NO: 9;

(qq) a nucleotide sequence encoding the amino acid sequence represented by the -217th to 240th amino acids of SEQ ID NO: 10;

(rr) a nucleotide sequence hybridizable with a nucleotide sequence which is complementary to the above nucleotide sequence (pp) or (qq) under stringent conditions and encoding a protein having the same property as that of the

protein having the amino acid sequence represented by the -217th to 240th amino acids of SEQ ID NO: 10;

(ss) a nucleotide sequence represented by the 156th to 806th bases of SEQ ID NO: 9;

(tt) a nucleotide sequence encoding the amino acid sequence represented by the -217th to -1st amino acids of SEQ ID NO: 10;

(uu) a nucleotide sequence hybridizable with a nucleotide sequence which is complementary to the above nucleotide sequence (ss) or (tt) under stringent conditions and encoding a protein having the same property as that of the protein having the amino acid sequence represented by the -217th to -1st amino acids of SEQ ID NO: 10;

(vv) a nucleotide sequence represented by SEQ ID NO: 1;

(ww) a nucleotide sequence hybridizable with a nucleotide sequence which is complementary to the above nucleotide sequence (vv) under stringent conditions and encoding a protein having the same property as that of the protein encoded by the nucleotide sequence represented by SEQ ID NO: 1;

(xx) a nucleotide sequence represented by SEQ ID NO: 3;

(yy) a nucleotide sequence hybridizable with a nucleotide sequence which is complementary to the above nucleotide sequence (xx) under stringent conditions and encoding

a protein having the same property as that of the protein encoded by the nucleotide sequence represented by SEQ ID NO: 3;

(zz) a nucleotide sequence represented by SEQ ID NO: 5;

(aaa) a nucleotide sequence hybridizable with a nucleotide sequence which is complementary to the above nucleotide sequence (zz) under stringent conditions and encoding a protein having the same property as that of the protein encoded by the nucleotide sequence represented by SEQ ID NO: 5;

(bbb) A nucleotide sequence represented by SEQ ID NO: 7;

(ccc) a nucleotide sequence hybridizable with a nucleotide sequence which is complementary to the above nucleotide sequence (bbb) under stringent conditions and encoding a protein having the same property as that of the protein encoded by the nucleotide sequence represented by SEQ ID NO: 7;

(ddd) a nucleotide sequence represented by SEQ ID NO: 9;

(eee) a nucleotide sequence hybridizable with a nucleotide sequence which is complementary to the above nucleotide sequence (ddd) under stringent conditions and encoding a protein having the same property as that of the protein encoded by the nucleotide sequence represented by SEQ ID NO: 9; and

(fff) a fragment of these nucleotide sequences (aa) to (eee).

43 (Withdrawn). The process according to claim 23, wherein the cells are *E. coli* cells, animal cells or insect cells.

44 (Withdrawn). The method according to claim 33, wherein the specimen is a body fluid.

45 (Withdrawn). The method according to claim 34, wherein the specimen is a body fluid.

46 (Withdrawn). A method for screening for an inhibitor of serine protease comprising comparing the enzyme activity of the protein according to claim 41 upon bringing the protein into contact with a candidate compound with the enzyme activity of the protein without contact with the candidate compound.

47 (Previously presented). A pharmaceutical composition comprising the protein according to claim 41.

48 (Withdrawn). A method for detecting a diagnostic marker for diseases in tissues comprising the protein according to claim 41, which comprises using an antibody against the protein according to claim 41.

49 (Withdrawn) . The method according to claim 48, wherein the marker is used for diagnosis of a cancer.

50 (Withdrawn) . A method for diagnosing Alzheimer's disease or epilepsy in the brain comprising using the marker according to claim 36.

51 (Withdrawn) . A method for diagnosing cancer or inflammation of the brain, prostate or testicle, comprising using the marker according to claim 36.

52 (Withdrawn) . A method for diagnosing sterility in semen or sperm comprising using the marker according to claim 36.

53 (Withdrawn) . A method for diagnosing prostatic hypertrophy comprising using the marker according to claim 36.